

Central Intelligence Agency



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DIRECTORATE OF INTELLIGENCE

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The Role of Inventories in the Oil Market

Summary

Expectation of a decline in oil prices is the main force triggering a sizable inventory liquidation in the present oil market that has pressed OPEC production below 15 million b/d. If companies persist in the belief that oil prices will decline further, destocking could keep demand for OPEC oil below 17 million b/d, through mid-year. Some rebuilding of inventories is likely to occur, however, before the seasonal rise in consumption next winter, boosting demand for OPEC oil to about 20 million b/d.

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This memorandum was prepared by [redacted] Chief, Energy Issues Branch, Office of Global Issues for Treasury Deputy Secretary McNamar. The information contained herein is updated to 14 March 1983. Comments may be directed to [redacted]

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SUBJECT: The Role of Inventories in the Oil Market

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The Role of Inventories in the Oil MarketAnatomy of Inventories

Oil consumers hold stocks for two primary reasons: (1) to meet operating requirements including the need to balance seasonal fluctuations in consumption, and (2) for speculative purposes such as insuring against unexpected delivery shortfalls or surges in demand.

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Inventories are categorized as primary stocks held by major companies and refiners' and secondary and tertiary stocks held by wholesalers, distributors and end users. Government-owned stocks are also included in primary stocks although they are outside the normal commercial channels.

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[redacted] nearly 70 percent of primary stocks represent minimum operating stocks needed to ensure smooth functioning of the distribution system. An additional 5-10 percent of primary stocks are compulsory stocks held by companies at the direction of foreign governments. Minimum operating stocks, government-owned stocks and compulsory stocks combined represent about 85 percent of total primary stocks and would normally not be available for commercial use.

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Present Stock Situation

We estimate primary stocks totalled about 4.8 billion barrels as of 1 January 1983 including 600 million barrels at sea, 500 million barrels of government-owned strategic stocks, and 300 million barrels of compulsory stocks. Nearly 250 million barrels of primary stocks represented seasonal demand for inventories to meet high winter consumption requirements. Based on these estimates and minimum operating requirements, an additional 400 million barrels could be considered available for drawdown, allowing companies to defer crude liftings in anticipation of a price reduction.

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Reliable estimates of secondary and tertiary stocks are not available. Based on one industry estimate, storage capacity for these stocks is about 3-4 billion barrels. Assuming a 50 percent capacity utilization rate, secondary and tertiary stocks probably total 1.5-2 billion barrels.

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Market Impact

Declining oil consumption, high interest rates, and surplus productive capacity combined to provide incentives for oil companies to reduce inventory levels last year. Companies managed to trim stocks at the rate of 1 million b/d during 1982, but because estimated levels of consumption exceeded actual

consumption in the fourth quarter, companies wound up with stocks in excess of their needs. As a result, there is still a substantial leeway to reduce inventories. [redacted]

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Pressures to unload stocks have been intensified in recent weeks by the likelihood of a decline in oil prices. Companies are now attempting to reduce stocks at a rapid rate to avoid the large accounting losses that would occur with a price drop. Moreover, continued declines in oil use are reducing the level of stock requirements and adding to surplus productive capacity in the system. Based on recent estimates of production and consumption, we believe that companies are now depleting primary inventories at the rate of about 4 million b/d compared with a normal seasonal rate of about 3 million b/d. Given this rate, companies could still sustain a net drawdown rate of 3 million b/d during the second quarter, implying that demand for OPEC crude oil would remain at about 16-17 million b/d. We believe there is also ample incentive for secondary and tertiary stockholders to reduce inventories although individually they do not have as much flexibility as primary stockholders. Beyond mid-year, however, we believe all inventory holders will have to begin rebuilding stocks for the winter. [redacted]

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#### Future Variables

The exact level of usable stocks held by companies is less a function of their intentions as it is a result of miscalculations in balancing supply and demand. Beyond minimum operating levels, compulsory stocks, and government-owned stocks, inventory levels are a residual that cannot easily be fine tuned to match a companies' financial objectives. Factors influencing future stock decisions include:

- o Expectations about future supply availability, particularly stability in certain key oil producing nations.
- o Estimates of future consumption levels including the strength of economic recovery.
- o The level of interest rates.
- o Expectations about future price movements. [redacted]

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Estimated Free World Oil Stocks  
January 1983

(billion barrels)

Land	4.2
Afloat	.6
Total Primary	4.8
of which:	
Minimum Operating	3.4
Government-Owned	.5
Compulsory	.3
Seasonal	.2
Available for liquidation	.4
Secondary/Tertiary Stocks	1.5-2.0



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